# Decisions

## Device specifications

-Device class: Human Interface Device – 0x03

Reason: devices like keyboards, mice, and game controllers usually are Human Interface Devices, so a steering wheel should also be a Human Interface Device.

-Power: Low-power – 100mA current – 5V voltage – 0.50W power

Reason: least power usage.

-Signaling: Low-speed – 1.5 Mbit/s – NRZI encoding – 1 HDX

Reason: The steering wheel does not need to send complex data streams, so little Mbit/s should be enough. This also gives more flexibility during syncing and choosing a sufficient crystal for timing. NRZI encoding and 1 HDX follow from this.0

Software used:

Logic Gates Circuits: CEDAR Logic Simulator 1.5

DC Circuits: TINA Version 9.3.200.277

Coding Uno board: Arduino IDE Version 2.1.1